

CLAIMS

What is claimed is:

1. A low-inductance electromagnetic drive without driving a magnetic flux circuit, comprising:
 - a magnetic pole;
 - a drive coil;
 - an upper magnetic inductive board;
 - a permanent-magnet;
 - a lower magnetic-inductive board, said magnetic pole being integrated with said lower magnetic-inductive board, said permanent magnet being located between said upper magnetic-inductive board and said lower magnetic-inductive board, wherein said drive coil at least partially surrounds said magnetic pole and is movable in an axial direction; and,
 - a first fastening coil with an inductance substantially equivalent to an inductance of said drive coil, wherein said first fastening coil is aligned in a position in said magnetic flux circuit and connected with said drive coil in opposite phase to receive the equivalent and opposite excitation.
2. The electromagnetic drive of claim 1, wherein said first fastening coil is located between said drive coil and said magnetic pole, fixed to said magnetic pole, and connected with said drive coil by opposite phase to obtain the smallest inductance the equivalent excitation of opposite phase.
3. The electromagnetic drive of claim 1, wherein said first fastening coil is fixed to said upper magnetic-inductive board, and connected with said drive coil by opposite phase to obtain the smallest inductance and the equivalent excitation of opposite phase.
4. The electromagnetic drive of claim 2, wherein said first fastening coil is connected with said drive coil by opposite phase in series connection or parallel connection to receive the equivalent excitation of opposite phase.
5. A low-inductance electromagnetic drive without driving magnetic flux circuit, comprising:
 - a magnetic pole;
 - a drive coil;
 - an upper magnetic-inductive board;

a permanent magnet;

a lower magnetic-inductive board integrally connected with said magnetic pole, wherein said permanent magnet is positioned between said upper magnetic-inductive board and said lower magnetic-inductive board, wherein said drive coil at least partially surrounds said magnetic pole and is removable in an axial direction; and,

a first fastening coil and a second fastening coil, the total inductance quantity of said first and second fastening coils is approximately equivalent to the inductance of said drive coil, wherein said first fastening coil and said second fastening coil are aligned in a position in the magnetic flux circuit, and are connected with said drive coil in opposite phase to receive the approximately equivalent excitation of opposite phase.

6. The electromagnetic drive of claim 5, wherein said first fastening coil and second fastening coil are both fixed on the magnetic pole and are both connected with said drive coil by opposite phase to obtain the smallest inductance quantity and the equivalent excitation of opposite phase.

7. The electromagnetic drive of claim 5, wherein said first fastening coil and said second fastening coil are fixed to the magnetic pole and upper magnetic-inductive board respectively, and they are connected with said drive coil by opposite phase to obtain the smallest inductance quantity and the equivalent excitation of opposite phase.

8. The electromagnetic drive of claim 6, wherein said first fastening coil and said second fastening coil are connected with said drive coil by opposite phase in series connection or parallel connection to receive the equivalent excitation of opposite phase.

9. The electromagnetic drive of claim 6, wherein said first fastening coil and said second fastening coil are connected with said drive coil by opposite phase in series connection and parallel connection to receive the equivalent excitation of opposite phase.

10. The electromagnetic drive of claim 1, wherein said first fastening coil is made of magnetic metal used for magnetic conducting.

11. The electromagnetic drive of claim 3, wherein said first fastening coil is connected with said drive coil by opposite phase in series connection or parallel connection to receive the equivalent excitation of opposite phase.

12. The electromagnetic drive of claim 5, wherein said first fastening coil is made of magnetic metal used for magnetic conducting.

13. The electromagnetic drive of claim 7, wherein said first fastening coil and said second fastening coil are connected with said drive coil by opposite phase in series connection or parallel connection to receive the equivalent excitation of opposite phase.

14. The electromagnetic drive of claim 7, wherein said first fastening coil and said second fastening coil are connected with said drive coil by opposite phase in series connection and parallel connection to receive the equivalent excitation of opposite phase.